State of California
DEPARTMENT OF TRANSPORTATION

Business, Transportation and Housing Agency

Memorandum

To: CHAIR AND COMMISSIONERS

CTC Meeting: December 11-12, 2002

Reference No.: 2.2c.(4)
Action Item

From: ROBERT L. GARCIA
Chief Financial Officer

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Subject: **APPROVAL OF PROJECT FOR FUTURE CONSIDERATION OF NEW PUBLIC ROAD CONNECTION, TO CONSTRUCT A NEW INTERCHANGE IN THE COUNTY OF EL DORADO NEAR SHINGLE SPRINGS, RESOLUTION NUMBER E-02-59.**

ISSUE:

The attached resolution proposes to approve for consideration of new public road connection the following project for which a Final Environmental Impact Report has been completed:

- Route 50 in El Dorado County – Construct a new interchange near Shingle Springs.

The project is completely funded by private developer fees. The estimated construction cost of Alternative B, the flyover interchange alternative, is $14,585,000. The estimated construction cost of Alternative C, the compact diamond interchange, is $18,301,000. Approval of a future New Public Road Connection will be requested at the December 2002 Commission Meeting.

The Environmental Impact Report, Executive Summary and Findings have been transmitted to California Transportation Commission staff.

The Department of Transportation has approved the project for construction. This approval and the resulting filing of the Notice of Determination with the Office of Planning and Research will satisfy the environmental requirements for this stage of the project planning process.

RECOMMENDATION:

The Department recommends that the California Transportation Commission, as a responsible agency, approve the attached Resolution E-02-59.

Attachment

CALIFORNIA TRANSPORTATION COMMISSION

Resolution for Future Consideration of New Public Road Connection
03-ED-50 KP R16.6/18.7 (PM R10.9/R14.2)

Resolution E-02-59

1.1 **WHEREAS,** the California Department of Transportation (Department) has completed a Final Environmental Impact Report in compliance with the California Environmental Quality Act, the CEQA Guidelines, and the California Transportation Commission Environmental Regulations for the following project:

- Route 50 in El Dorado County – Construct a new interchange near Shingle Springs.

1.2 **WHEREAS**, the Department has certified that the Environmental Impact Report has been completed in compliance with the California Environmental Quality Act (CEQA) and the State CEQA Guidelines for its implementation; and

1.3 **WHEREAS**, the California Transportation Commission, as a responsible agency, has considered the information contained in the Environmental Impact Report; and

1.4 **WHEREAS**, written Findings indicate that it is feasible to avoid or fully mitigate to a level less than significant the effects associated with impacts to Naturally Occurring Asbestos, traffic, construction-period air quality and noise levels, biological and cultural resources, hazardous materials and drainage as a result of the project;

2.1 **NOW, THEREFORE, BE IT RESOLVED** that the California Transportation Commission does hereby adopt those Findings that support approval of this recommended project to allow for future consideration of New Public Road Connection.

Chapter 2 Executive Summary

2.1 Introduction

2.1.1 Project Location

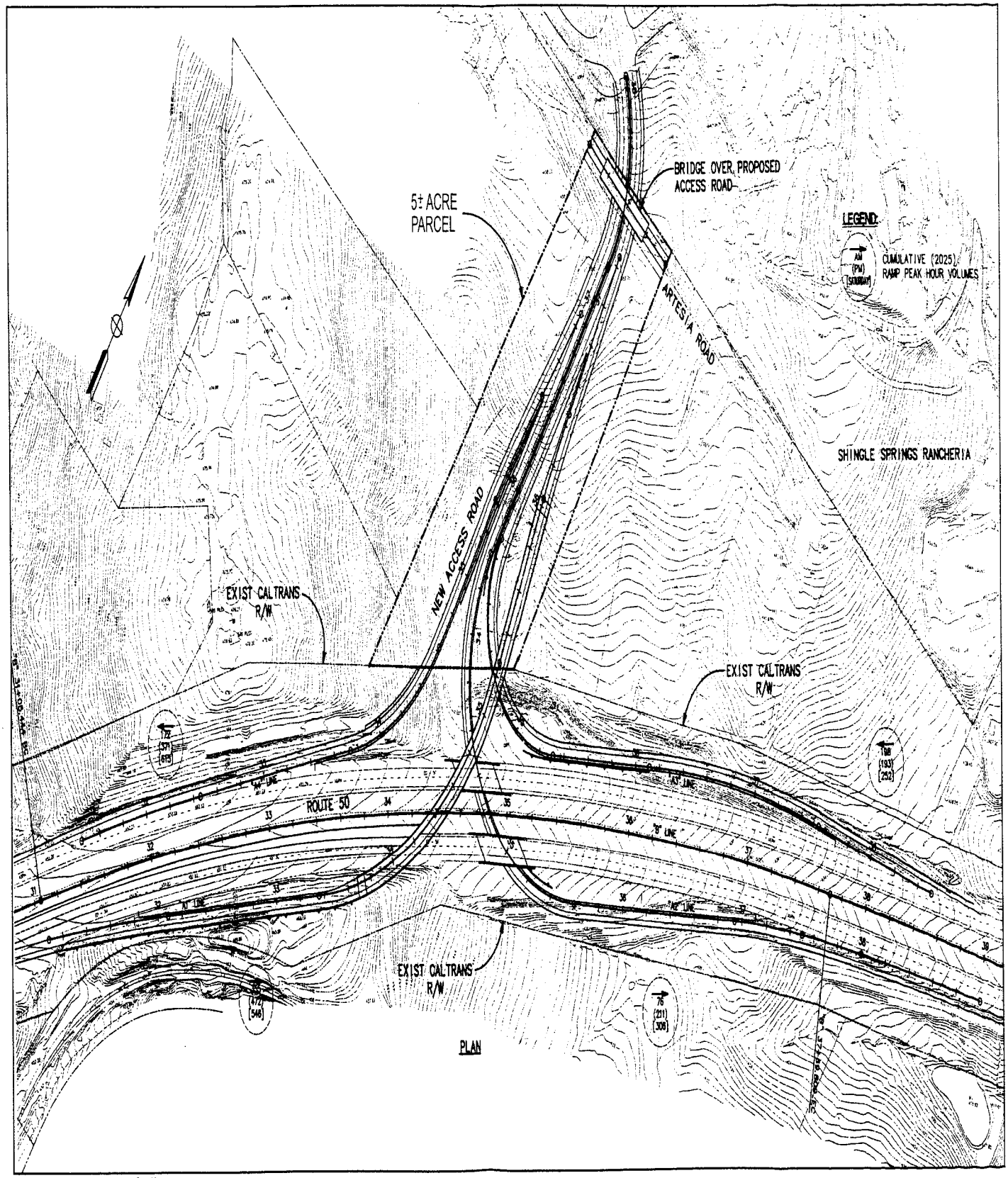
The Proposed Project would result in the construction of an interchange/access road from Highway 50 directly to the Shingle Springs Rancheria (Rancheria) located approximately nine miles west of Placerville, between the Shingle Springs Drive and Greenstone Road interchanges in El Dorado County (**Figures 1-1 and 1-2**).

2.1.2 Alternatives Considered

Two alternative designs were considered for the Proposed Project. Both of the alternatives will provide direct access to and from the Rancheria via eastbound and westbound on- and off-ramps. The first alternative design – the "Flyover Design" – uses a loop off-ramp in the eastbound direction (**Figure 2-1**). Vehicles exiting the freeway in either the eastbound or westbound direction will travel unimpeded by signals to the Rancheria boundaries. This alternative design would provide diagonal ramps for westbound movements, and direct connector ramps for eastbound movements. The second alternative design – the "Diamond Design" – is a diamond interchange located at the same location as the first alternative (**Figure 2-2**). Each on- and off-ramp under this design would include a controlled intersection directing vehicular traffic to the Rancheria. Each design alternative would include the construction of an eastbound auxiliary lane that would extend from the new interchange to the existing Shingle Springs Drive interchange (**Figure 2-3**).

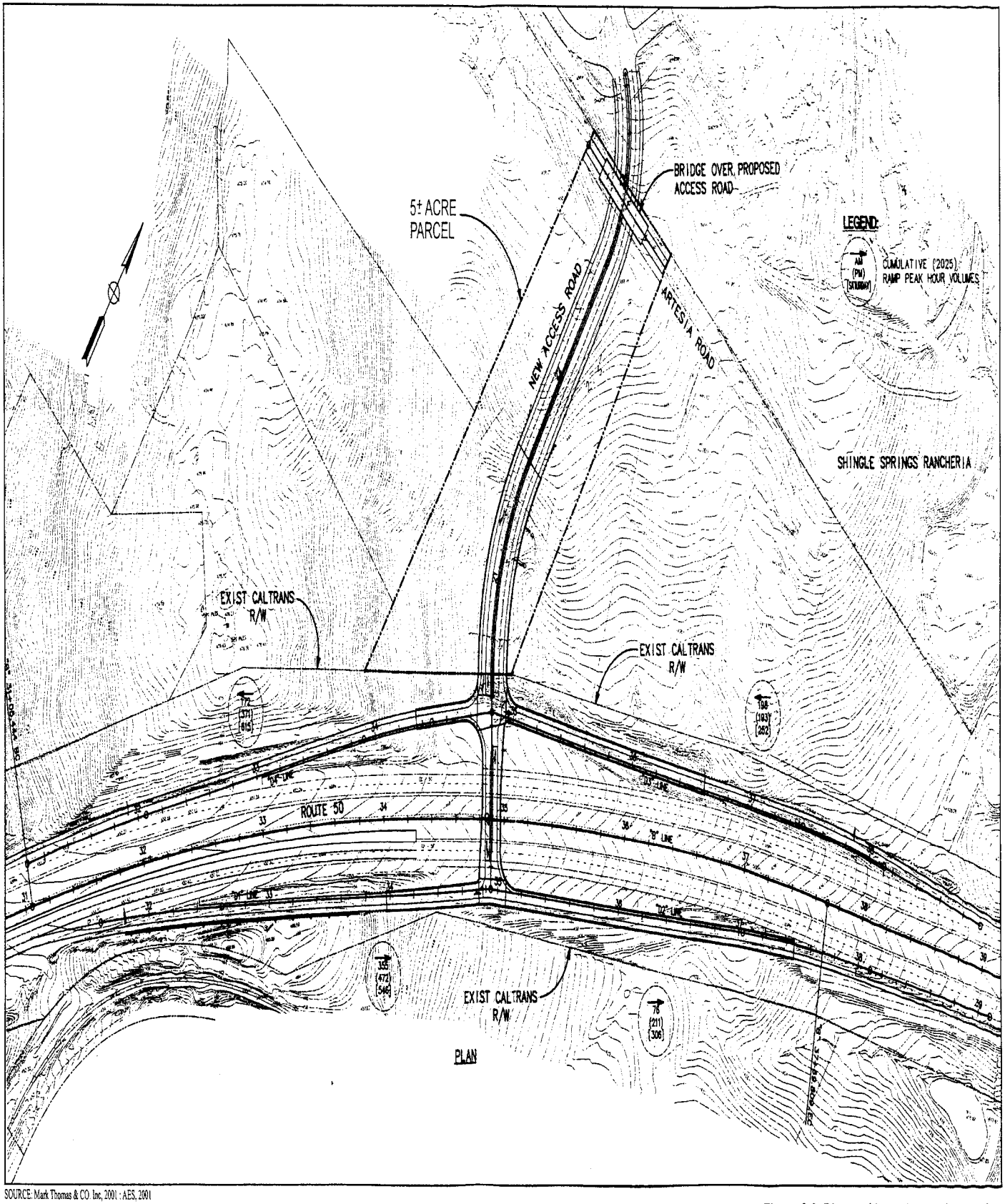
Both of the design alternatives evaluated an undercrossing at Artesia Road. Artesia Road is a private road immediately south of the existing Rancheria that provides access to 2 residences located between the Rancheria and the freeway. The proposed grade separation would preclude a future connection of Artesia Road to the interchange.

The entire interchange (under both design alternative) will be constructed within the Caltrans right-of-way (ROW) and a 5-acre parcel connecting the Caltrans ROW with the Rancheria. Approximately 4-acres of Caltrans ROW will be needed for the project. Therefore, the entire project site is approximately 9-acres in size. In addition to the above two design alternatives, the EIR/EA addressed the No Project/Action Alternative as mandated by CEQA and NEPA. The No Project/Action Alternative assumes that no interchange, or other direct



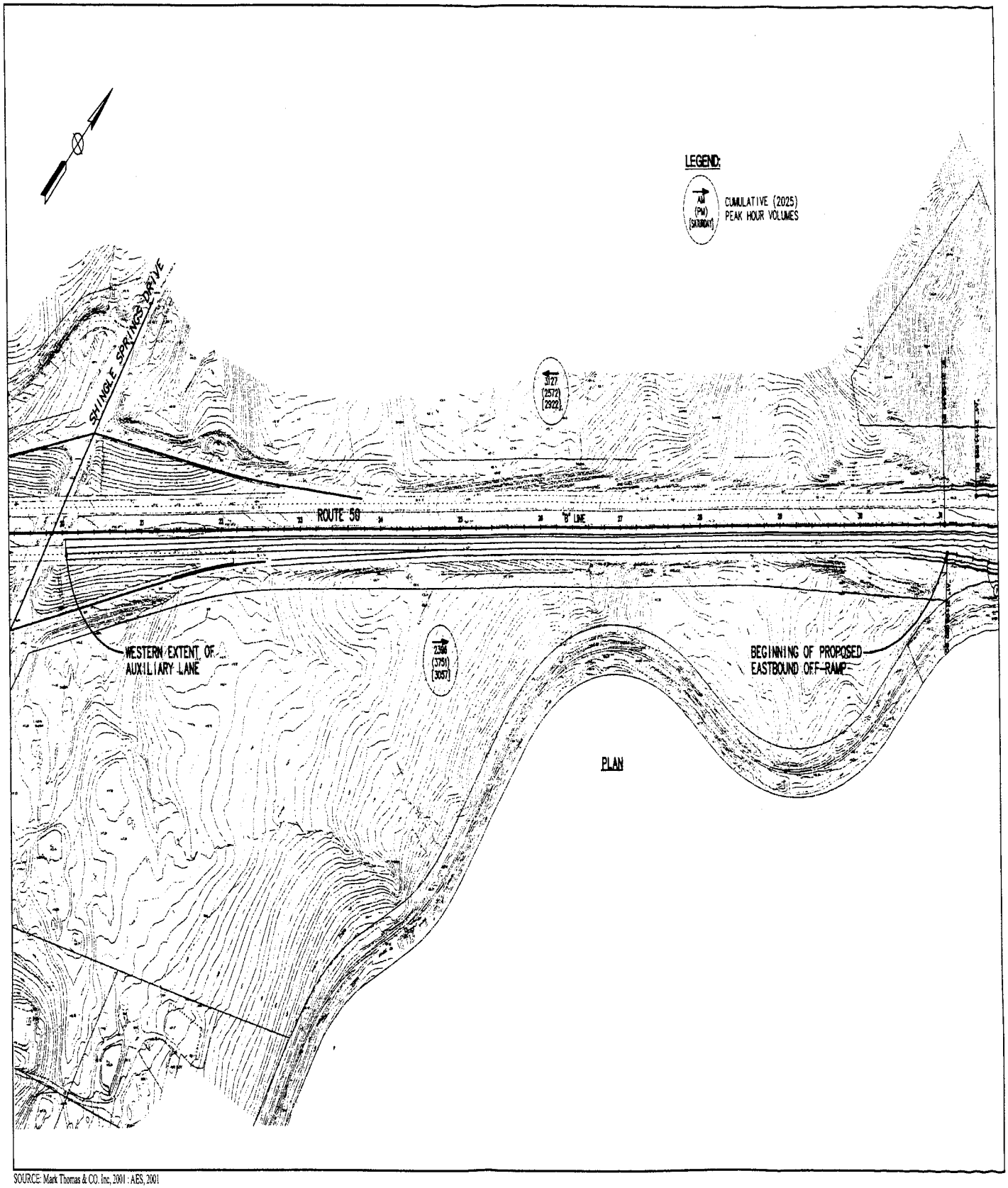
SOURCE: Mark Thomas & CO. Inc, 2001 ; AES, 2001

Figure 2-1 Flyover Interchange Alternative



SOURCE: Mark Thomas & CO. Inc, 2001 : AES, 2001

Figure 2-2 Diamond Interchange Alternative



SOURCE: Mark Thomas & CO. Inc, 2001 ; AES, 2001

Figure 2-3 Eastbound Auxiliary Lane

access, is provided to the Rancheria. The other assumption under the No Project/Action Alternative is that the Shingle Springs Rancheria will not build out with planned land uses.

2.2 Issues To Be Addressed And Potential Areas Of Controversy

In accordance with Section 15082 of the CEQA *Guidelines*, Caltrans circulated a NOP on July 5, 2001, for a 30-day review period. This notice was circulated to the public, local, state, and federal agencies, and other interested parties to inform responsible agencies and the public that the Proposed Project could have significant effects on the environment and to solicit their comments. The NOP and comment letters in response to the NOP are presented in **Appendix B**. Additionally, the BIA circulated a notice in December of 2001. This notice alerted the public, local, state, and federal agencies and other interested parties that the BIA was assuming a lead agency role because the proposed interchange is essential to relieving the landlocked status of the Rancheria. The notice included a statement that the proposed interchange has been made part of the Indian Reservation Roads (IRR) system, jointly administered by the Federal Highway Administration and the BIA. The notice was distributed to mailing list used by Caltrans for the NOP, plus those who commented during the 30-day review period. The notice and comment letters received in response to the notice are also presented in **Appendix B.**

The following environmental resources were found to have the potential of being significantly affected by the Proposed Project and have been addressed in greater detail in the EIR/EA.

- Land Use Consistency and Compatibility
- Geology and Soils
- Transportation/Circulation
- Air Quality
- Noise and Vibration
- Biological Resources
- Visual Resources
- Socioeconomics
- Cultural Resources
- Hazardous Materials
- Water Quality
- Drainage

As part of the BIA's obligation under the Federal Lands and Highways Program, 23 U.S.C. 204(a), and P.L. 93-638 [25 U.S.C. 450], the BIA consulted with the Tribe and Tribal Council during the preparation of the Shingle Springs Band of Miwok Indians Amended Transportation Plan and later conducted a public hearing on February 19, 2002, to consider public concerns with regard to designation of the proposed interchange as part of the federal highway system and construction of the interchange project. Notice of the hearing was provided to the public by mail, and by publication, and over 100 non-tribal members of the public attended the hearing conducted on the Rancheria (**Appendix B**).

As part of its supervision obligations pursuant to 23 U.S.C. 204(a), the BIA also took testimony at the same hearing (February 19, 2002) to ensure that the proposed interchange project met the Sacramento region's air quality conformity guidelines. The Clean Air Act requires that agencies of the federal government who are proponents of projects located within non-attainment areas demonstrate that the project will comply with the mobile sources budget in the state's implementation plan, 42 U.S.C. 7506. Because the interchange project is located within an ozone non-attainment area, the BIA was required to demonstrate that the project will not exceed the mobile source emissions budget contained within California's state implementation plan for the metropolitain planning area under the jurisdiction of the Sacramento Area Council of Governments (SACOG), 42 U.S.C. 7511. In compliance with this requirement, the BIA held a hearing February 19, 2002, to determine whether the project conformed with this mobile sources budget (**Appendix B**).

On March 12, 2002, the Regional Director of the BIA advised SACOG of its finding that the project complied with the transportation conformity requirements, pursuant to 40 CFR Part 93 (**Appendix B**). On April 16, 2002, SACOG stated that the project was incorporated into its baseline budget and that no further action was required (**Appendix B**). The area of controversy for the interchange project does not have to do with the interchange project per se. The construction of the interchange would allow free and open access to the Rancheria which currently experiences limited access. This open, unfettered access to the Rancheria will allow the Tribal Government to develop a hotel and gaming facility within the confines of the 160-acre Rancheria. This hotel and gaming facility project has recently been considered by the National Indian Gaming Commission (NIGC) under the NEPA process. The NIGC has issued a Finding of No Significant Impact (FONSI) that will allow for construction once the interchange project is approved.

Several commenters claim that the hotel and gaming project is an element of this interchange project, and the environmental effects of that project need to be considered as a direct project impact. As discussed below, the hotel and gaming project is not considered an element of this

project description; however, the effects of the hotel and gaming facility are considered a growth inducing/indirect impact. The growth inducing/indirect impact analysis for the hotel and gaming facility is incorporated by reference from the Final Environmental Assessment approved by the NIGC, and is presented in Chapters 6.0 and 9.0 of the Draft EIR/EA, respectively.

2.2.1 Project Description

Several NOP commenters raised the issue of the proposed Rancheria hotel and casino project and the assertion that it should be a component of the project description for purposes of this environmental review. The proposed hotel and casino is a separate project proposed for the southwest corner of the existing Rancheria. This project, consistent with Rancheria land use designations, was considered by the National Indian Gaming Commission (NIGC). The NIGC is a federal agency whose powers include overseeing gaming development and operation on Indian property. The NIGC's discretionary action for the hotel and gaming project included approval of the Gaming Management Contract between the Tribal Government and Lakes Gaming/Kean Argovitz Resorts. The foreseeable consequence of approval of the Gaming Management Contract includes the construction and operation of the hotel and casino; therefore, NEPA compliance was required. The NIGC approved a Finding of No Significance Impact (FONSI) for the hotel and casino project in January, 2002. The EA developed for the hotel and casino project included the construction and operation of an interchange at the location of the project site under consideration for this Draft EIR/EA.

The project description covered under this Draft EIR/EA is for the proposed interchange that would allow for access to the Rancheria. As shown in Chapter 3.0 of this document, the interchange is needed with or without the proposed hotel and casino project. The focus of this Draft EIR/EA is on constructing an interchange to provide access to the Rancheria. The foreseeable consequence of this interchange is the recently approved hotel and casino project located on the southwest corner of the Rancheria. The hotel and casino issues are indirect effects of the interchange project, not as a component of the project description. Information from the recently approved hotel and casino environmental assessment is incorporated by reference into this Draft EIR/EA. Please see Chapters 6.0 and 9.0 for the discussion of growth inducing and indirect effects.

By incorporating by reference and tiering from the NIGC EA and FONSI, the BIA recognizes that an agency with jurisdiction has evaluated on-reservation environmental impacts in a manner which does not impinge on Tribal sovereignty, as would be the case were a State agency to attempt to regulate on-reservation impacts.

2.2.2 Alternatives

NOP commenters stated that the Draft EIR/EA should address providing access to the south side of Highway 50, and should address an alternative that includes relocation of the project. The purpose of the Proposed Project is to provide open access to the Rancheria, which is located on the north side of Highway 50. Addressing an alternative that provides access to the south side of Highway 50 does not meet the project objectives stated in Chapter 3 of this Draft EIR/EA. Moreover, the environmental effects of providing access to the south side of Highway 50 would be greater than under the Proposed Project. Therefore, this alternative need not be considered within the context of this environmental document.

Relocating the interchange to a different location would not result in either attainment of the project objectives, nor would it reduce the environmental effects of the Proposed Project. An alternative interchange location that does not provide access to the existing Rancheria would not meet any of the project objectives; therefore, need not be considered within this Draft EIR/EA. Please see Chapter 3 for a discussion of alternatives eliminated from consideration.

Another issue regarding the need to consider a smaller hotel and gaming facility as an alternative was raised during the NOP comment period. The hotel and gaming facility is not an element of the Proposed Project considered in this document; therefore, alternative sizes need not be considered.

2.2.3 Shingle Springs Hotel And Casino

Several commenters presented information regarding the environmental effects of the hotel and gaming project that will be located on the existing Rancheria. As mentioned above, the hotel and gaming facility is not an element of the interchange Project Description. The hotel and casino is treated as a growth inducing/indirect effect of this interchange project for purposes of this environmental review. The various comments presented for the hotel and gaming facility were considered by the NIGC and BIA in the development of the Final EA. Information from the Final EA has been incorporated by reference into this Draft EIR/EA and is presented in Chapters 6.0 and 9.0.

2.2.4 Traffic

Comments were provided that focused on the traffic model used, El Dorado County Measure Y, trip generation assumptions, capture rate, local road impacts, and cumulative traffic. These comments were based on a publicly circulated EA by the BIA and NIGC for the hotel and casino project. Many of the traffic comments received during the NOP comment period

for this Draft EIR/EA were the same or similar comments submitted to the BIA and NIGC during the comment period on the EA. These comments were in no way related to the NOP information presented for this Proposed Project. The NIGC and BIA have reviewed these comments in light of the proposed hotel and gaming facility, revised the information accordingly, and issued a Final EA and FONSI for the hotel and casino project.

The traffic information provided in this Draft EIR/EA has, therefore, benefited from detailed public input provided during the previous NEPA process on the hotel and casino project, as well as the BIA's effort to amend the Tribal Transportation Plan and include the roadway into the IRR. The traffic analysis presented in Section 6.3 of this Draft EIR/EA considers the detailed input provided during the NOP comment period, as well as public input provided during the BIA's consideration of the amended Tribal Transportation Plan and inclusion of the roadway into the IRR.

2.2.5 Air Quality

As was the case for the traffic issue, a number of commenters presented a critique of the air quality information previously circulated for the EA prepared by the BIA and NIGC for the hotel and gaming facility. The detailed comments were not based on information presented in the NOP for the interchange project. The general category of issues raised during this NOP comment period included the need to analyze standard project specific and cumulative air quality emissions, asbestos emissions, and toxic air quality impacts.

The various detailed comments were considered by the NIGC and BIA in their drafting of the Final EA, which has been incorporated by reference into Chapter 9.0 of this Draft EIR/EA. Additionally, Section 6.4 of this Draft EIR/EA considered testimony presented at the February 19th hearing conducted by the BIA regarding compliance with the mobile sources budget, as well as the general categories of comments made regarding air quality impacts of the interchange project.

2.2.6 Growth Inducement

Growth inducement comments were mainly focused on impacts that would result from the hotel and gaming facility project, as opposed to the interchange project. Chapter 6.0 of this Draft EIR/EA focuses on the growth inducement of the interchange project. A separate section within Chapter 9.0 addresses the indirect growth inducing effects of the hotel and casino project. This information is incorporated by reference from the Final EA (December, 2001) for the hotel and casino project.

2.2.7 Comments Received on the EIR/EA

A Notice of Availability was mailed to interested people, agencies, and groups for availability of the Shingle Springs Interchange Draft EIR (**Appendix B**). The EIR comment period for the Draft EIR/EA was open from May 6, 2002 to June 20, 2002. The Draft EIR/EA was posted to the website of the California Department of Transportation, and the Draft EIR/EA was made available at the El Dorado County Library, El Dorado Hills Public Library, and mailed to people, agencies and groups requesting copies. In all, approximately 110 copies of the Draft EIR/EA were reproduced and distributed during the public comment period.

A public notice was mailed to people, agencies and interested groups regarding a Draft EIR/EA public comment meeting to be held on May 30, 2002 (**Appendix B**). The public comment meeting was held on May 30, 2002 in the community of Shingle Springs to provide environmental information to the public and to receive public feedback. Comments were received during the public comment period via e-mail, hand written comments, and a hearing transcript produced at the May 30th public comment meeting. Comments on the Draft EIR/EA were received from 51 parties prior to the close of the comment period. These comments are included within the Comments/Responses to Comments portion of this EIR/EA bound under a separate cover and available for review at the address listed in Section 1.4.4 of this EIR.

2.3 Summary Of Environmental Impacts

Table 2-1 presents a summary of project impacts and proposed mitigation measures that would avoid or minimize potential impacts. In the table, the level of significance of each environmental impact is indicated both before and after the application of the recommended mitigation measure(s). The following abbreviations have been used to identify the project alternatives:

Alternative A (AA): No Project/Action Alternative
Alternative B (AB): Flyover Design Interchange
Alternative C (AC): Diamond Design Interchange

For detailed discussions of all project impacts and mitigation measures, the reader is referred to environmental analysis sections in Chapter 5.0, Environmental Setting, Impacts, and Mitigation Measures.

2.4 Environmentally Superior Alternative

After reviewing the comparative impacts of all alternatives, the EIR concludes that the No Project/Action Alternative is the environmentally superior alternative. CEQA requires that should the No Project/Action Alternative be the environmentally superior alternative, the EIR must specify a development alternative which is environmentally superior to the other build alternatives (CEQA *Guidelines* Section 15126.6 (e) (2)). In this case, the EIR finds that Alternative B – Flyover Alternative Design is the environmentally superior alternative.

Alternative B would be located on the same site as Alternative C, which is the other interchange design alternative. As one can see from the attached summary tables, and the detailed analysis within Chapter 5.0, the comparative impacts of the two design alternatives are generally similar. However, Alternative C includes interchange intersections whereas Alternative B does not. This creates an added existing and cumulative traffic impact (6.3-3 and 6.3-7) for Alternative C when compared with Alternative B. In addition Alternative C would affect approximately 1.67 acres of mixed oak woodland, compared with approximately 1.1 acres for Alternative B. The visual alteration of the project area would be impacted less under Alternative B than Alternative C. This is due primarily to the more pronounced off- and on-ramps required under Alternative C. The undercrossing of the eastbound on-ramp and the at-grade westbound off- and on-ramps under Alternative B eliminates this added visual intrusion onto the surrounding viewscape. Lastly, the drainage inlet and culvert impacts associated with Alternative B are less than Alternative C. In summary, as noted in the summary tables and within Chapter 5.0 the magnitude of the transportation, biological, visual, and drainage impacts under Alternative B are less than Alternative C. Therefore, Alternative B is considered the environmentally superior build alternative.

TABLE 2-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

	Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.3	**Geology and Soils**			
5.3.1	**Seismic Ground Shaking**			
AA	Under the No Project Alternative, the interchange would not be constructed, and no slope excavation or grading would occur. The No Project Alternative will not result in a significant impact to the environment as related to geologic or seismic hazards.	NI	None required.	NI
AB	Ground shaking could result in damage and temporary closure of the freeway interchange, and portions of the access roadway. Although ground shaking is anticipated during the life of the project, the ground motions are likely to be less pronounced due to the underlying bedrock at the proposed interchange site. Construction of the Flyover Interchange Design will be required to comply with engineering requirements set forth by the Caltrans Seismic Design Criteria that apply conservative estimates of ground motion, restricts construction if underlying geologic (i.e. liquefaction susceptibility) conditions are unacceptable, and integrates appropriate foundation designs.	LTS	None required.	LTS
AC	Same as AB.	LTS	None required.	LTS
5.3.2	**Slope Instability And Landslide Hazards**			
AA	Under the No Project Alternative, the interchange would not be constructed, and no slope excavation or grading would occur. The No Project Alternative will not result in a significant impact to the environment as related to geologic or seismic hazards.	NI	None required.	NI
AB	Construction of the proposed on- and off-ramps for Flyover Interchange Design Alternative would require	LTS	None required.	LTS

Less than Significant = LTS Significant = S Significant and Unavoidable = SU NI = No Impact

TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

	Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
	hillside excavation and grading, and would include construction of a tie-back wall and retaining wall to provide structural support of the bedrock, especially in areas with jointing or fracturing rock. As required by the HDM, a geotechnical design report (GDR) will be prepared. The GDR will include a site-specific geotechnical analysis and provide recommendations and guidelines for all earthwork associated with the project, including slope excavation, tie-back and retaining wall design, and final slope configuration. The development of the proposed Flyover interchange design alternative would be required to comply with Caltrans, and where applicable El Dorado County grading ordinances and UBC standards for design and construction.			
AC	Same as AB.	LTS	None required.	LTS
5.3.3	**Soil Erosion**			
AA	Under the No Project Alternative, the interchange would not be constructed, and no slope excavation or grading would occur. The No Project Alternative will not result in a significant impact to the environment as related to geologic or seismic hazards.	NI	None required.	NI
AB	Potential soil erosion hazards would be addressed through compliance with Caltrans and El Dorado County grading ordinances. Following standard, site-specific geotechnical engineering studies performed during the design stage, the Caltrans GDR would include erosion control features to be implemented during construction activities. Furthermore, the Proposed Project would be required to comply with grading, erosion and sediment control standards of the El Dorado County Municipal Code (Chapter 15.14), and applicable codes and requirements of the 1997 UBC with California additions (Title 22).	LTS	None required.	LTS
AC	Same as AB.	LTS	None required.	LTS

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TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

	Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.3.4	**Excavation of Serpentinite**			
AA	Under the No Project Alternative, the interchange would not be constructed, and no serpentinite would be encountered. The No Project Alternative will not result in a significant impact to the environment as related to serpentinite hazards.	NI	None required.	NI
AB	West-bound on-ramp and east-bound off-ramp construction would likely encounter serpentinite (at the west end of the interchange project site) if the road cut slopes on either side of the highway require ripping, grading, drilling or excavation.	S	Mitigation Measure 5.5-2	LTS
AC	Same as AB	S	Mitigation Measure 5.5-2	LTS
5.3.5	**Cumulative Impacts**			
AA	The No Project Alternative will not contribute to cumulative geology and soil impacts.	NI	None required.	NI
AB	The only project specific geology and soil impact identified is related to the excavation of serpentinite. The serpentinite impact is related to air quality emissions (asbestos). The implementation of air quality mitigation measures will assure that Alternative B will not significantly add to the cumulative release of asbestos containing materials.	LTS	None required.	LTS
AC	Same as AB.	LTS	None required.	LTS
5.4	**Transportation/Circulation**			
5.4-1	**Existing Plus Project- Ramp Merge/Diverge Operations**			
AA	There would be no impact associated with the No Project Alternative, as the interchange and the hotel and casino would not be constructed.	NI	None required.	NI

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TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

	Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
AB	The freeway ramp merge/diverge areas for the new interchange are projected to operate acceptably at LOS D or better during all three peak hour scenarios for existing conditions with the new interchange and casino/hotel. This is considered to be less than significant as the threshold for determining a significant impact is LOS F.	LTS	None required.	LTS
AC	Same as AB.	LTS	None required.	LTS
5.4-2	**Existing Plus Project- Peak Hour Freeway Mainline Operations**			
AA	There would be no impact associated with the No Project Alternative, as the interchange and the hotel and casino would not be constructed.	NI	None required.	NI
AB	The freeway is projected to operate acceptably at LOS D or better during all three peak hour scenarios for existing conditions with the new interchange and casino/hotel. This is considered to be less than significant as the threshold for determining a significant impact is LOS F.	LTS	None required.	LTS
AC	Same as AB.	LTS	None required.	LTS
5.4-3	**Existing Plus Project- Interchange Intersection Operations**			
AA	There would be no impact associated with the No Project Alternative, as the interchange and the hotel and casino would not be constructed.	NI	None required.	NI
AB	Since there are no intersections associated with the Flyover Alternative, there would be no impact associated with the Flyover Alternative.	NI	None required.	NI
AC	The eastbound ramp intersection would operate at an unacceptable level of service (LOS F) as an unsignalized intersection during Saturday Peak Hour conditions.	S	A) It is recommended that the two newly created intersections under AC be signalized, and that the signals be coordinated to assure that queues would not develop which would block the westbound ramp intersection.	LTS

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TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

	Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.4-4	**Existing Plus Project- Local Roads Analysis**			
AA	There would be no impact associated with the No Project Alternative, as the interchange and the hotel and casino would not be constructed.	NI	None required.	NI
AB	This alternative was found to not significantly impact any of the local roadways and highways (including US-50, SR-49, and SR-193) for existing conditions on an average weekday.	LTS	None required.	LTS
AC	Same as AB.	LTS	None required.	LTS
5.4-5	**Cumulative Plus Project- Ramp Merge/Diverge Operations**			
AA	There would be no impact associated with the No Project Alternative, as the interchange and the hotel and casino would not be constructed.	NI	None required.	NI
AB	The westbound off-ramp is found to operate acceptably at LOS D for all peak hour scenarios, whereas both on-ramps are projected to operate acceptably at LOS E or better. Therefore, these are considered as less-than-significant impacts. However, the eastbound off-ramp would operate unacceptably at LOS F for cumulative conditions during both the weekday PM peak hour and Saturday peak hour. This is considered a significant impact.	S	A) Provide an eastbound auxiliary lane for AB and AC between the eastbound East Shingle Springs Drive on-ramp and the eastbound off-ramp to the Rancheria. The provision of this auxiliary lane would result in acceptable LOS D or better operation for the eastbound off-ramp during all three peak hour scenarios during the cumulative year.	LTS
AC	Same as AB.	S	Same as AB.	LTS
5.4-6	**Cumulative Plus Project- Peak Hour Freeway Mainline Operation.**			
AA	There would be no impact associated with the No Project Alternative, as the interchange and the hotel and casino would not be constructed.	NI	None required.	NI
AB	The freeway is projected to operate acceptably at LOS E or better for both east and west of the proposed	S	Mitigation Measure 5.4-5 (A)	LTS

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TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

	Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
	interchange along both directions during AM and Saturday peak hour conditions. During the PM peak hour, the freeway is projected to operate acceptably at LOS E or better both east and west of the proposed interchange along the westbound direction, and east of the proposed interchange along the eastbound direction. Therefore, these are considered less-than-significant impacts. However, the freeway is projected to operate unacceptably at LOS F west of the proposed interchange along the eastbound direction during the PM peak hour. Therefore, this is considered a significant impact			
AC	Same as AB.	S	Same as AB.	LTS
5.4-7	**Cumulative Plus Project- Interchange Intersection Operations**			
AA	There would be no impact associated with the No Project Alternative, as the interchange and the hotel and casino would not be constructed.	NI	None required.	NI
AB	Since there are no intersections associated with the Flyover Alternative, there would be no impact associated with the Flyover Alternative.	NI	None required.	NI
AC	The eastbound ramp intersection would operate at an unacceptable level of service (LOS F) as an unsignalized intersection during Saturday Peak Hour conditions.	S	Mitigation Measure 5.4-3 (A)	LTS
5.4-8	**Cumulative Plus Project- Ramp Metering**			
AA	There would be no impact associated with the No Project Alternative, as the interchange and the hotel and casino would not be constructed.	NI	None required.	NI
AB	During Saturday peak hour conditions are when traffic volumes along the new on-ramps would be heaviest., queues may exceed the storage.	S	A) Implement the recommended metering rates along the newly created on-ramps.	LTS

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	Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
AC	Same as AB.	S	Same as AB.	LTS
5.4-9	**Cumulative Plus Project- Local Roads Analysis**			
AA	There would be no impact associated with the No Project Alternative, as the interchange and the hotel and casino would not be constructed.	NI	None required.	NI
AB	This alternative was found to not significantly impact any of the local roadways and highways (including SR-49 and SR-193, but excluding US-50) for cumulative conditions on an average weekday. Additionally, the proposed project was found to not significantly impact US-50 within El Dorado County east of El Dorado Hills Boulevard. The project will add to a projected deficiency along Highway 50 between the County line and the El Dorado Hills Boulevard.	S	A) Pursuant to Section 10.8 of Tribal State Compact, the tribal government will contribute a fair share contribution to future master planned improvements as identified by Caltrans and El Dorado County for the section of US-50 between the El Dorado County Line and El Dorado Hills Boulevard.	LTS
AC	Same as AB.	S	Same as AB.	LTS
5.5	**Air Quality**			
5.5-1	**Construction Emissions**			
AA	No construction will occur as a result of the No Project Alternative. Under the No Project Alternative, neither the proposed interchange nor the proposed hotel/casino would be constructed.	NI	None required.	NI
AB	Construction of the Proposed Project would results in the temporary generation of emissions of ROG, NOx, and PM_{10}. Construction-related emissions result from construction equipment exhaust, construction employee commute travel, and fugitive dust from land clearing, earthmoving, and wind erosion of exposed soil. Additionally, asphalt paving activity generates emissions of ROG.	S	A.) Water all active construction areas at least twice daily; B.) Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer); C.) Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites; D.) Sweep daily (preferably with water sweepers) all paved	LTS

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TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

	Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			access roads, parking areas and staging areas at construction sites; and E.) Sweep streets daily (preferably with water sweepers) if visible soil material is carried onto adjacent public streets. F.) Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more); G.) Enclose, cover, water twice daily, or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.); H.) Limit traffic speeds on unpaved roads to 15 miles per hour; I.) Install sandbags or other erosion control measures to prevent silt runoff to public roadways; J.) Replant vegetation in disturbed areas as quickly as possible. And K.) Designate a person or persons to oversee the implementation of a comprehensive dust control program and to increase watering, as necessary. L.) To the extent feasible, require the use of construction equipment that meets the new emission standards for diesel engine-powered equipment. M.) To reduce construction-related NOx emissions, all construction vehicles and equipment shall be properly maintained and operated.	
AC	Same as AB.	S	Same as AB	LTS
5.5-2	**Asbestos Emissions**			
AA	No action will occur as a result of the No Project Alternative. Under the No Project Alternative, neither the proposed interchange nor the proposed hotel/casino would be constructed.	NI	None required.	NI

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

	Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
AB	El Dorado County is located in the Sierra Foothills, where serpentine rock occurs abundantly. Serpentine rock often contains asbestos. When serpentine rock is broken or crushed, naturally-occurring asbestos may be released from the rock and may become airborne, causing a potential health hazard. Construction of the Proposed Project may result in the disturbance of asbestos-containing rock and soil. This is considered a potentially significant impact.	S	A). Comply with Chapter 8.44 of Title 8 of the El Dorado County Ordinance Code, "Naturally Occurring Asbestos and Dust Protection Ordinance". Section 8.44.030 of this ordinance specifically addresses "General Requirements for Grading, Excavation and Construction Activities".	LTS
AC	Same as AB.	S	Same as AB	LTS
5.5-3	**General Conformity with the State Implementation Plan**			
AA	No action will occur as a result of the No Project Alternative. Under the No Project Alternative, neither the proposed interchange nor the proposed hotel/casino would be constructed.	NI	None required.	NI
AB	Under the federal CAA amendments of 1990, federal agencies must make a determination of conformity with the applicable SIP before taking any action on a Proposed Project. The U.S. EPA has established "de minimis" emissions thresholds that are used to determine whether a conformity determination is required. Implementation of the Proposed Project would result in 2.02 tons per year of VOC emissions, 16.00 tons per year of NO_x emissions, and 55.98 tons per year of PM_{10} emissions. Since these values are lower than the de minimis thresholds, a conformity determination is not necessary for the Proposed Project.	LTS	None required.	LTS
AC	Same as AB.	LTS	Same as AB	LTS
5.5-4	**Transportation Conformity with the State Implementation Plan**			
AA	No action will occur as a result of the No Project Alternative. Under the No Project Alternative, neither the	NI	None required.	NI

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TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

	Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
	Alternative. Under the No Project Alternative, neither the proposed interchange nor the proposed hotel/casino would be constructed.			
AB	For the conformity analysis of the Shingle Springs Rancheria project, emission levels were compared to emissions budgets for three types of pollutants: ROG, NOx, and CO. The estimates of regional mobile source emissions for each of the three analysis years and each of the three types of pollutants are less than the emissions budget. Since these emission estimates, which include emissions associated with the Shingle Springs Rancheria project, are less than the emissions budgets, the Shingle Springs Rancheria project conforms with the SIP.	LTS	None required.	LTS
AC	Same as AB.	LTS	Same as AB	LTS
5.5-5	**Carbon Monoxide Emissions**			
AA	No action will occur as a result of the No Project Alternative. Under the No Project Alternative, neither the proposed interchange nor the proposed hotel/casino would be constructed.	NI	None required.	NI
AB	CO concentrations associated with the Proposed Project are the sum of background CO levels and the project contribution from vehicular emissions. Air Quality Modeling (CALINE4, EMFAC7F (Version 1.1)) results presented CO concentrations under both Existing Plus Project Conditions and 2025 Cumulative Plus Project Conditions that are lower than the CO air quality standards.	LTS	None required.	LTS
AC	Same as AB.	LTS	Same as AB	LTS
5.5-6	**Cumulative Carbon Monoxide Impacts**			
AA	The No Project Alternative will not contribute to cumulative air quality impacts.	NI	None required.	NI

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

	Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
AB	Under Existing Plus Project Conditions, the highest 1-hour value is 3.0 ppm and the highest 8-hour value is 2.1 ppm. These concentrations are estimated to occur southeast of the existing casino site. Both the 1-hour value and the 8-hour value under Existing Plus Project Conditions are below the CO air quality standard. Under 2025 Cumulative Plus Project Conditions, the highest 1-hour value is 2.5 ppm and the highest 8-hour value is 1.8 ppm. These concentrations are estimated to occur southeast of the existing casino site. Both the 1-hour value and the 8-hour value under 2025 Cumulative Plus Project Conditions are below the CO air quality standard.	LTS	None required.	LTS
AC	Same as AB.	LTS	Same as AB	LTS
5.6	**Noise and Vibration**			
5.6-1	**Traffic Noise Impact (Existing and Cumulative)**			
AA	The No Project Alternative would not result in construction activities or future commercial development of the Rancheria.	NI	None required.	NI
AB	At receivers 6 and 7, the predicted future cumulative traffic noise levels for this alternative exceeds the NAC. The predicted changes in traffic noise levels at those locations due to the project are about 1 dBA as compared to future No Project conditions, which is less than the 12 dBA threshold for a substantial increase. Under The Protocol, if a traffic noise impact is predicted, noise abatement measures must be evaluated and considered.	LTS	None required	LTS
AC	Same as AB.	LTS	Same as AB.	LTS
5.6-2	**Construction Equipment Noise**			
AA	The No Project Alternative would not result in construction activities or future commercial development of the	NI	None required.	NI

TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

	ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	Rancheria.			
AB	During the construction phase of the project, noise from construction activities would dominate the noise environment in the immediate area. Activities involved in construction would generate noise levels, as indicated in Table 5.6-8 ranging from 70 to 90 dB at a distance of 50 feet. Construction activities would be temporary in nature, typically occurring during normal working hours. Construction noise impacts could be significant, as nighttime operations or use of unusually noisy equipment could result in annoyance or sleep disruption for nearby residences. Noise levels resulting from potential blasting during construction are also a concern. Preliminary engineering work conducted for the project indicates that some of the exposed rock in the cutbank at the top of the ridge will need to be presplit prior to excavation (north and south of the Highway). Presplitting is defined as the establishment of a free surface or shear plane in rock along the specified excavation slope by the controlled use of explosives and blasting accessories in appropriately aligned and spaced drill holes. The specific type and location of blasting that may be required for this project have not been determined, and the noise levels from blasting activities are affected by many variables, which include the size of the explosive charge, relative timing of individual detonations, the amount of overburden that is covering the charges, and the time of day or night when the blast occurs. El Dorado County does not have noise-level criteria for evaluating noise impacts associated with blasting activities; however, blasting activities may disturb nearby residents.	S	**General** A). Construction noise can be mitigated to less than significant levels by requiring compliance with Caltrans standard specifications Section 7-1.01I "Sound Control Requirements." These requirements state that noise levels generated during construction shall comply with applicable local, state and federal regulations, and that all equipment shall be fitted with adequate mufflers according to the manufacturers' specifications. **Rock Prespliting** B). Blasting will be performed in accordance with Caltrans' "Standard Specifications" including Sections 7-1.10 and 19-2.03). The specifications and special provisions developed for blasting will address safety issues and avoidance of damage to existing pavement, utilities, subdrains, structures, and other natural and human-made features. C). Blasting will comply with the following recommendations: 1.) A qualified blasting contractor will be retained to determine the size, type, and location of blasting so as to minimize disturbance to nearby residents, and to ensure that no property damage will result from blast noise and vibration. 2.) Blasting will be conducted to minimize impacts on the traveling public. If possible, blasting will be conducted during non-peak, midmorning hours on Tuesdays, Wednesdays, or Thursdays. Blasting will be avoided during morning or afternoon peak-hour traffic conditions, and from noon on Friday to noon on Monday. 3.) The blasting contractor will be responsible for all traffic control during blasting, including stopping traffic in both directions, minimizing flyrock during the blasting, and	LTS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

	Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			cleaning up any blast debris. 4.) Changeable message signs will be used to notify the traveling public of traffic delays during blasting events.	
AC	Same as AB.	S	Same as AB.	LTS
5.7	**Biological Resources**			
5.7-1	**Impacts to Upland Vegetation**			
AA	Under the No Project Alternative, there will be no change in the existing conditions within the project area and impacts to botanical resources will not occur.	NI	None required.	NI
AB	Up to 1.1 acres of mixed oak woodland could be permanently removed by the Fly-Over Interchange Alternative. These impacts could include the removal of several existing trees and some California annual grassland. While permanent impacts to California annual grassland are considered less than significant, some revegetation may be necessary to prevent erosion of exposed soils previously covered in grassland vegetation.	S	A.) The removal of riparian and upland vegetation will be minimized whenever possible. B.) Temporally impacted annual grasslands and valley oak woodland will be restored by replanting native and naturalized species endemic to the site, including valley oak (*Quercus lobata*), blue oak (*Quercus douglasii*), and native grass seed (as described in Section 4.0). C.) All temporarily disturbed areas will be restored to original grade and revegetated to minimize erosion. The replanting process will be on-going throughout construction, with planting beginning as construction related activities end in a given area. Riprap will not be used as a substitute for revegetation except in areas where the project Engineer has deemed that vegetation will not likely become reestablished and channel erosion protection is necessary. Additional erosion control measures, such as straw mulch, may be used if vegetation cannot be immediately established during the wet season. D.) In order to compensate for potential habitat on the site that would be lost to development, a payment into to El Dorado County's approved mitigation area for threatened and endangered plants of the Pine Hill gabbro formation shall	LTS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

	Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			be made. This payment should follow the County's formula, based on the number of square feet of development within different "mitigation zones." If the County does not accept this payment, then the same amount shall be paid into another mitigation fund to provide an equivalent level of mitigation	
AC	Up to 1.67 acres of mixed oak woodland could be permanently removed by the Diamond Interchange Alternative. These impacts could include the removal of several existing trees and some California annual grassland. If oak trees would be removed, this would be a potentially significant impact. While permanent impacts to California annual grassland are considered less than significant, some revegetation may be necessary to prevent erosion of exposed soils previously covered in grassland vegetation	S	Same as AB	LTS
5.7-2	**Impacts to Non-Special Status Species**			
AA	Under the No Project Alternative, there will be no change in the existing conditions within the project area, and to special-status species.	NI	None required.	NI
AB	Construction of the interchange will result in short-term impacts to terrestrial wildlife. There is a regional abundance of common wildlife species and the relatively small amount of area that would be impacted permanently or temporarily.	LTS	None required.	LTS
AC	Same as AB.	LTS	None required.	LTS
5.7-3	**Impacts to Special-Status Species**			
AA	Under the No Project Alternative, there will be no change in the existing conditions within the project area, and impacts to special-status species will not occur.	NI	None required.	NI
AB	There could be impacts to plant and animal special-status species within the project area. Appendix E lists all	LTS	A.) Tree removal shall occur between October and February, which is outside of the nesting period for raptors.	LTS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

	Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
	species observed during field investigations. None of the special-status species addressed in this document were observed in the project area. Nevertheless, mitigation will be undertaken to mitigate for the potential that special-status species could be in the project area.		which is outside of the nesting period for raptors. B.) If the timing of the above Measure is not feasible, pre-construction nest surveys of the trees to be removed will be conducted to ensure that no occupied nests are destroyed. A qualified biologist shall conduct surveys prior to any vegetation removal that lies within the nesting period (i.e., March to July). If an occupied nest of a special-status bird is identified in vegetation planned for removal, the disturbance will be delayed until fledging of the nesting young has been verified by a subsequent survey. The CDFG will be consulted for any additional requirements if a nest is identified. C.) Special-status bat species may roost behind loose bark on large snags in the Environmental Study Limits during the night or day. Mitigation may be achieved by surveying snags, that have a diameter at breast height (DBH) greater than 15 inches (38.1 centimeters), for evidence of roosting bats prior to removal. Snags should be should be checked in the evening and morning for the presence of bats by a qualified biologist prior to any removal activities. If any bats are present in the snags, the biologist should remove the bat for safe relocation at nighttime (bats flying during the day could be subject to predation by birds-of-prey).	
AC	Same as AB.	LTS	Same as AB.	LTS
5.7-4	**Impact to Wetlands/Waters of the United States**			
AA	Under the No Project Alternative, there will be no change in the existing conditions within the project area, and impacts to wetlands/waters of the United States will not occur.	NI	None required.	NI
AB	Approximately 0.057 acre (0.023 hectare) of "waters of the U.S" would be permanently impacted by the construction of the Proposed Project. This permanent impact consists of the partial fill of an ephemeral stream during widening of the roadway, and is considered a significant impact.	S	A.) Construction activities within 100 feet (30.5 meters) of ephemeral streams will be restricted , or a BMP plan approved by Caltrans will be implemented during construction activities.	LTS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

	Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
	Temporary impacts are those areas within 100 feet (30.5 meters) of the construction footprint within the project site. Up to 0.03 acre (0.01 hectare) of "waters of the U.S." could be temporarily impacted on-site. Any potential temporary impacts to Slate Creek may be avoided with the use of Best Management Practices (BMPs). No jurisdictional wetlands occur in the project area. A Nationwide 14 permit will be obtained from the ACOE and a 1601 Streambed Alteration Agreement from CDFG.		B.) Appropriate mulch will be applied to areas where vegetation has been removed to reduce short-term erosion as soon as feasible after construction. Soils will not be left exposed during the rainy season. C.) Silt fencing will be placed upstream and downstream of the construction zone to prevent sediment disturbed during construction from being transported and deposited outside of the construction zone. D.) Sediment control measures will be in place prior to the onset of the rainy season and will be monitored and maintained in good working condition throughout the year. E.) A spill prevention plan will be implemented for potentially hazardous materials. The plan will include the proper handling and storage of all potentially hazardous materials, as well as the proper procedures for cleaning up and reporting of any spills. If necessary, containment berms will be constructed to prevent spilled materials from reaching aquatic resources.	
AC	Same as AB.	S	Same as AB.	LTS
5.7-5	**Cumulative Impact**			
AA	Under the No Project Alternative, there will be no change in the existing conditions within the project area, therefore, no this alternative will not contribute to cumulative effects.	NI	None required.	NI
AB	Both alternatives may contribute to cumulative effects through reducing the amount of oak woodland habitat in the Sierra foothills. Proposed and current residential and commercial development along the Highway 50 corridor has likely reduced dispersal, foraging, and breeding habitat for several species of wildlife, thereby reducing the viability of local populations. Implementation of either alternative may contribute to this reduction in habitat, resulting in reduced management options. However, the Proposed Project is not expected to contribute significant	LTS	None required.	LTS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

	ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	cumulative impacts because of the relatively small area that will be impacted by the project and because of the mitigation measures that will be implemented as part of the project, which has reduced project effects. Cumulative effects to special status plants have occurred through the increased rate of construction of homes and businesses on the gabbro soils during the last 10 to 20 years. There has been extensive development along the Highway 50 corridor during this time period, with much of the land being cleared for commercial and residential uses. Residential construction in the nearby Cameron Park area in the midst of the chaparral community has limited the amount of potential habitat for these species in the foothills. Implementation of either of the proposed alternatives has the potential to contribute to this loss of habitat. However, with the implementation of mitigation measure 5.7-4, this cumulative effect will be reduced.			
AC	Same as AB.	LTS	Same as AB.	LTS
5.8	**VISUAL RESOURCES**			
5.8-1	**Impacts To Visual Resources**			
AA	Under the No Project Alternative, the interchange would not be constructed; therefore, no visual change would occur on or around the project site.	NI	None required.	NI
AB	There are three vantage points for the Fly-Over Interchange Design Alternative: (1) westward view, (2) eastward view, and (3) northward view. The Flyover Interchange would introduce a new urban feature (i.e., interchange) into the environment. As the eastbound traveler approaches the ridge of the project site, the bridge structure would come into view. An open view to the foothills of the Sierra Nevada will be off in the distance. This interrupted view of the Sierra Nevada	LTS	None required.	LTS

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	ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	would only occur for a short traveling distance. The westbound traveler would have a longer uninterrupted view of the new interchange than the eastbound traveler. The most dominate view on the westbound approach is the Highway 50 cut bank that was engineered to make way for the highway alignment. Another feature of the project design is the development of a retaining wall on the south side of the Highway and a scaling back of the cut bank on the north side of the highway. Neither the north nor the south cut banks on Highway 50 are considered to be scenic rock outcroppings. They exist due to the construction of Highway 50 which created the cut banks to make room for the roadway. As noted in the Regulatory Setting discussion, the project site does not exist within a state scenic highway; therefore, a less than significant impact will exist.			
AC	Same as AB. In addition, The Diamond Alternative would result in an alteration of the visual character of the project area. The visual effect of the AC would be more pronounced when compared with the AB.	LTS	None required.	LTS
5.8-2	**Cumulative Impacts To Visual Resources**			
AA	Under the No Project Alternative, the interchange would not be constructed; therefore, no visual change would occur on or around the project site.	NI	None required.	NI
AB	The roadway network surrounding the project site is assumed to remain the same for cumulative conditions as currently exist for existing conditions. There are no programmed improvements for Highway 50 for cumulative conditions; therefore, a 4-lane facility is assumed for cumulative conditions in the vicinity of the project site. Alternatives B will not add to altered cumulative conditions	LTS	None required.	LTS

TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

	ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	for visual resources along the highway.			
AC	Same as AB.	LTS	None required.	LTS
5.9	**SOCIOECONOMICS**			
5.9-1	**Socioeconomic Character Of Surrounding Area**			
AA	Under the No Project Alternative, the interchange would not be constructed; therefore, the hotel/casino complex would not be constructed.	NI	None required.	NI
AB	The project area is characterized by rural residential land uses and relatively large parcel sizes. The project would not result in the removal of businesses or represent a substantial impairment to the economic viability of an existing commercial district. There are no businesses within the project area. The project would not impede planned economic growth, as there are no planned commercial land uses locally, and regional plans for economic growth would be determined by El Dorado County.	LTS	None required.	LTS
AC	Same as AB.	LTS	None required.	LTS
5.9-2	**Displacement Of Persons Or Housing**			
AA	Under the No Project Alternative, the interchange would not be constructed; therefore, the hotel/casino complex would not be constructed. The No Project Alternative will not result in a significant impact to the surrounding community with regards to the displacement of persons or housing.	NI	None required.	NI
AB	Both design alternatives would be constructed within existing Caltrans right-of-way (ROW) and a five-acre parcel connecting the Shingle Springs Rancheria to Highway 50. The existing residence on the 5-acre parcel is owned by the Rancheria and is currently occupied by a	LTS	None required.	LTS

TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

	Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
	Tribal member. The tribal member will move back into a residence on the Rancheria once construction begins. The access road would cross under Artesia Road that currently provides access to two residential parcels east of the proposed roadway. The undercrossing will assure that access to the two residential parcels is maintained.			
AC	Same as AB.	LTS	None required.	LTS
5.9-3	**Minority And/Or Low-Income Populations**			
AA	Under the No Project Alternative, the interchange would not be constructed. The impact associated with minority and/or low-income populations is related to the lack of an ability to construct commercial generating uses on the Rancheria. This effect is considered an indirect effect that is discussed within Chapter 10 of this EIR/EA. For purposes of this analysis, there are no direct effects of not constructing the proposed interchange.	NI	None required.	NI
AB	There are two potentially affected neighborhoods or residential subdivisions adjacent to the Shingle Springs Rancheria within the study area. Those neighborhoods are "Grassy Run" to the northeast and "Buckeye Rancheros" to the west/southwest of the Rancheria. However, as mentioned above, the median income of the project area is above that of the nation, and there are few minorities living in the project area. The only low-income and minority population that has been identified is the Shingle Springs Rancheria community, which will directly benefit from improved emergency and commercial access.	LTS	None required.	LTS
AC	Same as AB.	LTS	None required.	LTS
5.9-4	**Neighborhood Impacts**			
AA	Under the No Project/Action Alternative, the interchange would not be constructed. There would be no impacts to	NI	None required.	NI

TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

	Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
	surrounding neighborhoods.			
AB	There are two potentially affected neighborhoods or residential subdivisions adjacent to the Shingle Springs Rancheria within the study area. Those neighborhoods are "Grassy Run" to the northeast and "Buckeye Rancheros" to the west/southwest of the Rancheria. However, neither alternative design of the proposed interchange would physically divide these neighborhoods, present barriers or access limitations that would impede planned residential growth or other uses of land, or disrupt community cohesion.	LTS	None required.	LTS
AC	Same as AB.	LTS	None required.	LTS
5.9-5	**Cumulative Socio-Economic Impacts**			
AA	Under the No Project Alternative, the interchange would not be constructed. The lack of an interchange to the Rancheria will result in the inability to develop revenue generating uses and provide adequate ingress/egress from the Rancheria. However, this is treated as an indirect effect within Chapter 10 of this EIR/EA.	NI	None required	NI
AB	The interchange alternative will not contribute to significant cumulative effects associated with the displacement of persons or housing. As discussed in Impacts 5.9-2, there is only one house that will be affected. This house is currently owned and occupied by Tribal members. This project, considered together with cumulative growth, will not result in cumulative displacement of people or housing. The same is true for the socioeconomic character of the surrounding area. The proposed interchange will not prevent people from accessing their properties. Since there are no transportation related cumulative development projects to consider for the project area, no cumulative effects will be experienced. The increased traffic along the roadway network, resulting from cumulative growth, will not prevent the use of	LTS	None required.	LTS

TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

	Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
	adjacent property. Lastly, the proposed interchange will not result in a cumulative effect to minority and/or low income populations.			
AC	Same as AB.	LTS	None required.	LTS
5.10	**Cultural Resources**			
5.10-1	**Discovery of Prehistoric, Archaeological and Paleontological Resources**			
AA	Under the No Project Alternative, the interchange would not be constructed, therefore, no impact upon prehistoric, archaeological, or paleontological resources would occur on or around the project site.	NI	None required.	NI
AB	Construction of the proposed on- and off-ramps for Flyover Interchange Design Alternative would require hillside excavation and grading which could result in the possibility that some prehistoric, archaeological, or paleontological resources could be uncovered. No prehistoric or historic-period sites or features have been formally recorded within or adjacent to the project area. Several sites have been identified within the vicinity, but none of these previously recorded sites will be affected by the interchange project. Additionally, no evidence of prehistoric presence was identified during the pedestrian survey. These negative results are attributed in part to the absence of a suitable surface water source within the project area, and to the extensive disturbance to which most of the project area has been subjected.	S	A.) In the event that any prehistoric, archaeological, or paleontological resources are discovered during construction-related activities, work near the resources shall be halted and a qualified archaeologist or paleontologist shall be commissioned to assess the significance of the find. If any find were determined to be significant, by the qualified archaeologist or paleontologist, then the qualified archaeologist and/or paleontologist would meet with Caltrans and BIA officials to determine the appropriate course of action.	LTS
AC	Same as AB.	S	Same as AB.	LTS
5.10-2	**Disturbance to Historic Cultural Material**			
AA	Under the No Project Alternative, the interchange would not be constructed, therefore, no impact upon cultural	NI	None required	NI

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	Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
	resources would occur on or around the project site.			
AB	Construction of the proposed on- and off-ramps for fly-over interchange design alternative would require disturbance to the ground surface ranges within the project area. A portion of the 5-acre parcel between Highway 50 and the Rancheria has been partially developed for residential use. An existing house and associated outbuildings are located within this location, however were constructed in 1982 and are not considered historic. No evidence of demonstrably historic-period homesteading, occupation, ranch use, mining or other activities was observed within the project area. Again, these negative results may be attributed at least in part to the extensive disturbance and prior development to which most of the project area has been subjected.	LTS	None required.	LTS
AC	Same as AB.	LTS	None required.	LTS
5.10-3	**Cumulative Cultural Resource Impacts**			
AA	Under the No Project Alternative, the interchange would not be constructed, therefore, no cumulative impact upon cultural resources would occur on or around the project site.	NI	None required	NI
AB	The analysis conducted for the proposed interchange concluded that no prehistoric archaeological or historic period sites or features have been formally recorded within or adjacent to the project area. Additionally, no evidence of prehistoric presence was identified during the survey. Lastly, the analysis concluded that the project would not result in an impact to historic cultural material. Therefore, the only effect potentially associated with the proposed interchange is the loss of undiscovered artifacts. Implementation of Mitigation 5.10-1(A) will assure that the proposed interchange project will not result in a	S	Mitigation 5.10-1(A)	LTS

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TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

	Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
	cumulatively considerable impact to cultural resources.			
AC	Same as AB.	S	Mitigation 5.10-1(A)	LTS
5.11	**Hazardous Materials**			
5.11-1	**Exposure of Individuals to Contaminated Soil and/or Groundwater**			
AA	No development will occur as a result of the No Project Alternative.	NI	None Required.	NI
AB	The Phase I Environmental Site Assessment completed for the project site did not identify any obvious signs of hazardous material contamination on the project site or adjacent properties. As a part of the Phase I Site Assessment federal, state, and regional governmental agency database searches were made for records of known sites of hazardous materials generation, storage or contamination. The database searches included the CORTESE database, which is the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, as required by CEQA. The project site was not listed on any of the databases that were searched. However, the potential does exist for previously unidentified soil and/or groundwater contamination to be encountered during project site preparation and construction activities. Encountering contaminated soil and groundwater without taking proper precautions could result in the exposure of construction workers and consequently result in associated significant adverse health effects.	S	A.) If contaminated soil and/or groundwater is encountered or suspected contamination is encountered during project construction, work shall be halted in the area, and the type and extent of the contamination shall be identified. A qualified professional, in consultation with regulatory agencies (RWQCB, DTSC, and/or EDCEMD) shall then develop an appropriate method to remediate the contamination. If necessary, a remediation plan shall be implemented in conjunction with continued project construction.	LTS
AC	Same as AB.	S	Same as AB.	LTS
5.11-2	**Risk of Accidental Release of Hazardous Materials**			
AA	No development will occur as a result of the No Project Alternative.	NI	None required.	NI

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TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

	Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
AB	During grading and construction activities it is anticipated that limited quantities of miscellaneous hazardous substances, such as gasoline, diesel fuel, hydraulic fluid, solvents, oils, paints, etc. would be brought onto the site. Temporary bulk above-ground storage tanks, 55-gallon drums, sheds/trailers would likely be used by various contractors for fueling and maintenance purposes. As with any liquid and solid, during handling and transfer from one container to another, the potential for an accidental release exists. Depending on the relative hazard of the material, if a spill were to occur of significant quantity, the accidental release could pose both a hazard to construction employees as well as the environment.	S	A.) The project applicant shall ensure, through the enforcement of contractual obligations, that all contractors transport, store, and handle construction related hazardous materials in a manner consistent with relevant regulations and guidelines, including those recommended and enforced by the U.S. Department of Transportation, RWQCB, EDCEMD, and the El Dorado County Fire Protection District. The project applicant shall also ensure that all contractors immediately control the source of any leak and immediately contain any spill utilizing appropriate spill containment and countermeasures. If required by any regulatory agency, contaminated media shall be collected and disposed of at an off-site facility approved to accept such media. In addition, all precautions required by the RWQCB issued NPDES construction activity storm water permits will be taken to ensure that no hazardous materials enter any storm drains or nearby waterways.	LTS
AC	Same as AB.	S	Same as AB.	LTS
5.11-3	**Exposure of Individuals to Asbestos Containing Dust**			
AA	No development will occur as a result of the No Project Alternative.	NI	None required.	NI
AB	Asbestos is the name for a group of naturally occurring silicate minerals. When serpentine rock is broken or crushed, asbestos may be released from the rock and may become airborne for long periods of time, causing a potential health hazard.	S	Implement Mitigation 5.5-2.	LTS
AC	Same as AB.	S	Implement Mitigation 5.5-2	LTS
5.11-4	**Exposure of Individuals to Wildland Fires**			
AA	No development will occur as a result of the No Project Alternative.	NI	None required.	NI
AB	Wildland fires present a serious safety issue in the area. Construction of the Proposed Project may introduce	S	A.) The project applicant will ensure, through the enforcement of contractual obligations, that during construction, staging	LTS

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TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

	ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	potential sources for fire. During construction, equipment and vehicles may come in contact with wildland areas and accidentally spark and ignite vegetation. The use of power tools and acetylene torches may also increase the risk of fire hazard. This risk is similar to that found at other construction sites.		areas, welding areas, or areas slated for development using spark-producing equipment shall be cleared of dried vegetation or other materials that could serve as fire fuel. To the extent feasible, the contractor shall keep these areas clear of combustible materials in order to maintain a firebreak. Any construction equipment that normally includes a spark arrester shall be equipped with an arrester in good working order. This includes, but is not limited to, vehicles, heavy equipment, and chainsaws.	
AC	Same as AB.	S	Same as AB.	LTS
5.11-5	**Cumulative Impacts to Hazardous Materials**			
AA	The No Project/Action Alternative will not contribute to cumulative Hazardous Materials impacts.	LTS	None required.	LTS
AB	There are no significant cumulative impacts related to hazardous materials. Therefore, the proposed interchange project will not add to cumulative impacts concerning hazardous materials.	LTS	None required.	LTS
AC	Same as AB.	S	Same as AB.	LTS
5.12	**WATER QUALITY**			
Impact	**5.12-1 Short-term Impacts on Water Quality from Construction**			
AA	No action will occur as a result of the No Project Alternative.	NI	None required.	NI
AB	Construction of the Flyover Interchange would involve soil-disturbing activities such as vegetation removal, grading, and excavation which may result in soil erosion and sediment discharge into surface waters, increased turbidity, and downstream sediment deposition. Temporary stockpiling of excavated soils would have the same effect if subject to erosion during rainfall. In addition,	LTS	None required.	LTS

TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

	Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
	fuels, solvents, and other chemicals used in construction activities could be accidentally spilled, dumped, or discarded and ultimately leak into Tennessee or Slate Creeks. As stated previously, the Proposed Project would require the preparation of a SWPPP under the Caltrans statewide NPDES permit (CAS000003, Order No. 99-06-DWQ) and general construction NPDES permit (CAS000002, Order No. 99-08-DWQ) issued by the SWRCB. These permits prohibit the discharge of waste, including soil and sediment, which causes pollution or nuisance. The RWQCB also reserves the option to specify additional requirements it may consider necessary to meet water quality standards. The conditions to protect water quality outlined in the NPDES permits, the SWPPP, and any additional RWQCB requirements would be implemented to mitigate impacts on water resources to a less-than significant level. Construction activities will comply with all requirements and guidelines associated with the aforementioned NPDES permits. A SWPPP will be created by the contractor and implemented under the Caltrans Construction SWMP to outline BMP's that minimize impacts to water quality. A Notice of Intent (NOI) for the SWPPP will be formulated and enacted prior to construction activities. The SWPPP will also be kept on site for the duration of all construction and maintained in accordance with the applicable NPDES permits.			
AC	Same as AB.	LTS	None required.	LTS
5.12-2	**Impacts from Erosion Related to Stream or River Alteration**			
AA	No action will occur as a result of the No Project Alternative.	NI	None required.	NI

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TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

	Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
AB	Construction of the Flyover Interchange or the Diamond Interchange will not result in significant alterations to any jurisdictional waterbody or channel. A 75 square foot (7.0 square meter) portion of one of the ephemeral drainages will be impacted by fill to allow for the transportation crossing. Section 404 permit will be obtained from the Army Corp of Engineers to allow for the fill and construction of the linear transportation crossing over the ephemeral drainage. Section 401 certificate will be obtained from the RWQCB and will outline site-specific BMP's for discharges during construction and operation. Under Section 1601of the California Fish and Game Code, an agency proposing to substantially divert the natural flow of a stream, substantially alter its bed or bank, or use any material from the streambed, must first enter into a "Streambed Alteration Agreement" with CDFG. The Proposed Project would require a Streambed Alteration Agreement. Other onsite drainages will be temporarily altered during construction, but later restored. No significant change to erosion or siltation on- or off-site as a result of streambed alterations is expected.	LTS	None required.	LTS
AC	Same as AB.	LTS	None required.	LTS
5.12-3	**Impacts to Groundwater Quality**			
AA	No action will occur as a result of the No Project Alternative.	NI	None required.	NI
AB	The Proposed Project is not expected to change the quality of groundwater by interceptions of groundwater flow through cuts to the native topography. The Proposed Project will not utilize groundwater during operations.	LTS	None required.	LTS
AC	Same as AB.	LTS	None required.	LTS
5.12-4	**Cumulative Impacts To Water Quality**			
AA	This alternative would result in no impacts.	NI	None required.	NI

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TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

	Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
AB	As outlined in the drainage section, project construction would result in increased impervious surfaces from the construction of on-ramps and off-ramps. This increase in impervious surface area would result in less infiltration of rainfall into the ground within the project area, causing total runoff volumes to increase. This increase in highway runoff has the potential to degrade water quality over time, particularly during "first flush" storm events. As stated earlier, the proposed interchange falls under the Caltrans statewide NPDES permit (CAS000003, Order No. 99-06-DWQ) issued by the RWQCB. The SWMP prepared pursuant to this permit outlines methodologies for selection and implementation of BMPs to mitigate adverse impacts to water quality, and the NPDES permit requires the implementation of appropriate BMPs. These BMPs are expected to mitigate any impacts to water quality. Appropriate BMPs will be selected and implemented using the SWMP guidance in an effort to reduce impacts to water quality to the maximum extent possible. These BMP's fall into several categories: Category IA (Maintenance BMPs), Category IB (Design Pollution Prevention BMPs), and Category III (Treatment BMPs) (Caltrans, 2001a). These BMPs will be adopted under the appropriate Caltrans programs..	LTS	None required.	LTS
AC	Same as AB.	LTS	None required.	LTS
5.13	**Drainage**			
5.13-1	**Peak Flow**			
AA	Since the No Project Alternative will not result in an increase in impervious surfaces the existing surface discharge predictions will remain the same.	NI	None required.	NI
AB	The maximum expected additional discharge is during a 100 year, 1 hour storm. Half of the additional paved area will be constructed on existing impervious surfaces leading	LTS	None required.	LTS

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TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

	Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
	to no net increase of peak discharge from these areas. However, impervious surfaces placed on top of the 5.6 acre (2.3 ha) access parcel, the Rancheria, and the northern Caltrans right of way will add 2.27 acres (.92 ha) of impervious surface area and 1.75 acres (.71 ha) of other altered surfaces (slopes, fill areas, graded swales, etc.). The soil is already prone to high discharges during storms (82% during a 2.33 year event accounting for slopes and land cover), so the additional increases as part of the weighted average add to a naturally high discharge. The post project weighted runoff coefficient is 85, with the predicted change in discharge being 3 cfs for the impacted project area during a 2.33-year event. These additional discharges and resulting peak flows will not exceed the design requirements of the existing culverts.			
AC	Same as AB	LTS	None required.	LTS
5.13-2	**Structural Alterations To Existing Surface Drainage Patterns**			
AA	Since the No Project Alternative will not result in an increase in impervious surfaces the existing surface discharge predictions will remain the same.	NI	None required.	NI
AB	The west-bound off-ramp will likely result in the in filling of the drainage channel for Drainage Area 1 (D1). Presently, this channel is down cutting through the native soils before encountering bedrock near Culvert #1. The down cutting begins on the northeast end of the westbound emergency turnout and continues for approximately 300 feet (91 m) reaching depths of up to 8 feet (2.4 m). The cross-section for the westbound ramp shows a graded slope that would result in this channel being filled. This would result in the existing drainage channel being filled and a new channel being constructed closer to private property.	S	A). Mitigation for AB includes installing a culvert for the length of the filled in channel.	LTS
AC	The Diamond design will alter existing hydraulic gradients. These alterations to the hydraulic gradients will transfer	S	B). Mitigation for AC includes re-vegetating with appropriate plants for the conditions created by the raised off-ramps	LTS

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TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

	ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	water from the Slate Creek watershed to the Tennessee Creek watershed. The elevated off-ramps and roadways will leave open soil underneath. This soil will have different re-vegetation characteristics than pre-project and will alter the soil moisture and storm discharge budget. If the soil is not in optimal condition to receive precipitation, it will not re-vegetate appropriately, thereby generating additional surface discharge and suspended sediments.		and roadways. Mitigation for the altered hydraulic gradients is addressed by the additional discharge being retained in a detention reservoir on the Rancheria after construction of the Casino/Hotel.	
5.13-3	**Impacts To Existing Drainage Structures**			
AA	Since the No Project Alternative will not result in an increase in impervious surfaces the existing surface discharge predictions will remain the same.	NI	None required.	NI
AB	Increases in peak runoff ≤1 cfs, representing an increase of much less than 1%) are expected to occur at the Highway 50 culvert or at the Reservation Road bridge during a 100-year event. These additions will not alter the performance of the two crossings during the design storm. On-site culverts will not be impacted by additional post-project discharges. The only existing culvert that may be impacted by construction of the Flyover design is Culvert 1. Both the outlet and inlet to this culvert appear to be affected by the construction of the east-bound on-ramp and the west-bound off-ramp, respectively. According to the engineered drawings for the Flyover alternative, cutting and filling will take place on this culvert. The head of the Drainage 2 channel will be altered by cutting and filling activities as well.	S	A) Although project runoff does not increase flow in Slate Creek at the Reservation Road bridge, impacts at this structure could be lessened by retaining additional flows on-site within the Caltrans ROW or on the 5.6 acre (2.3 ha) trust parcel until the Casino/Hotel is constructed. Once completed, the Casino surface drainage network will remove 3.12 acres (1.3 ha) from Sub-basin D1, somewhat reducing the design discharge. B) Impacts to Culvert 1 can be mitigated by either replacing the culvert or creating a box entrance at the inlet side and extending the outlet past the on-ramp. C) Impacts to Sub-basin D2 structures can be mitigated by relocating the open concrete drain within the Caltrans ROW. D) Impacts to culvert inlet and outlets by construction can be mitigated by placing pylons at least thirty (30) feet (9.1 m) away from the culverts or re-engineering the culvert inlet and outlets to fit the structural needs at the project site.	LTS
AC	As with the Flyover interchange design, preliminary drawings show that the placement of the east-bound off-ramp and the west-bound on-ramp may interfere with	S	A) Although project runoff does not increase flow in Slate Creek at the Reservation Road bridge, impacts at this structure could be lessened by retaining additional flows	LTS

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TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

	Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
	inlets and outlets of Culverts 1 and 2 through cut and fill activities or the placement of pylons at these features.		on-site within the Caltrans ROW or on the 5.6 acre (2.3 ha) trust parcel until the Casino/Hotel is constructed. Once completed, the Casino surface drainage network will remove 3.12 acres (1.3 ha) from Sub-basin D1, somewhat reducing the design discharge. D) Impacts to culvert inlet and outlets by construction can be mitigated by placing pylons at least thirty (30) feet (9.1 m) away from the culverts or re-engineering the culvert inlet and outlets to fit the structural needs at the project site.	
5.13-4	**Cumulative Impacts To Drainage**			
AA	Under the No Project Alternative, the interchange would not be constructed; therefore, no impact upon Drainage would occur on or around the project site.	NI	None required.	NI
AB	The only project specific drainage impact identified is related to an increase in impervious surface, that will result in an increase in flows into culverts. The implementation of Drainage mitigation measures will assure that Alternative B will not significantly add to the cumulative impact of flows upon culverts	LTS	None Required.	LTS
AC	Same as AB.	LTS	None Required.	LTS

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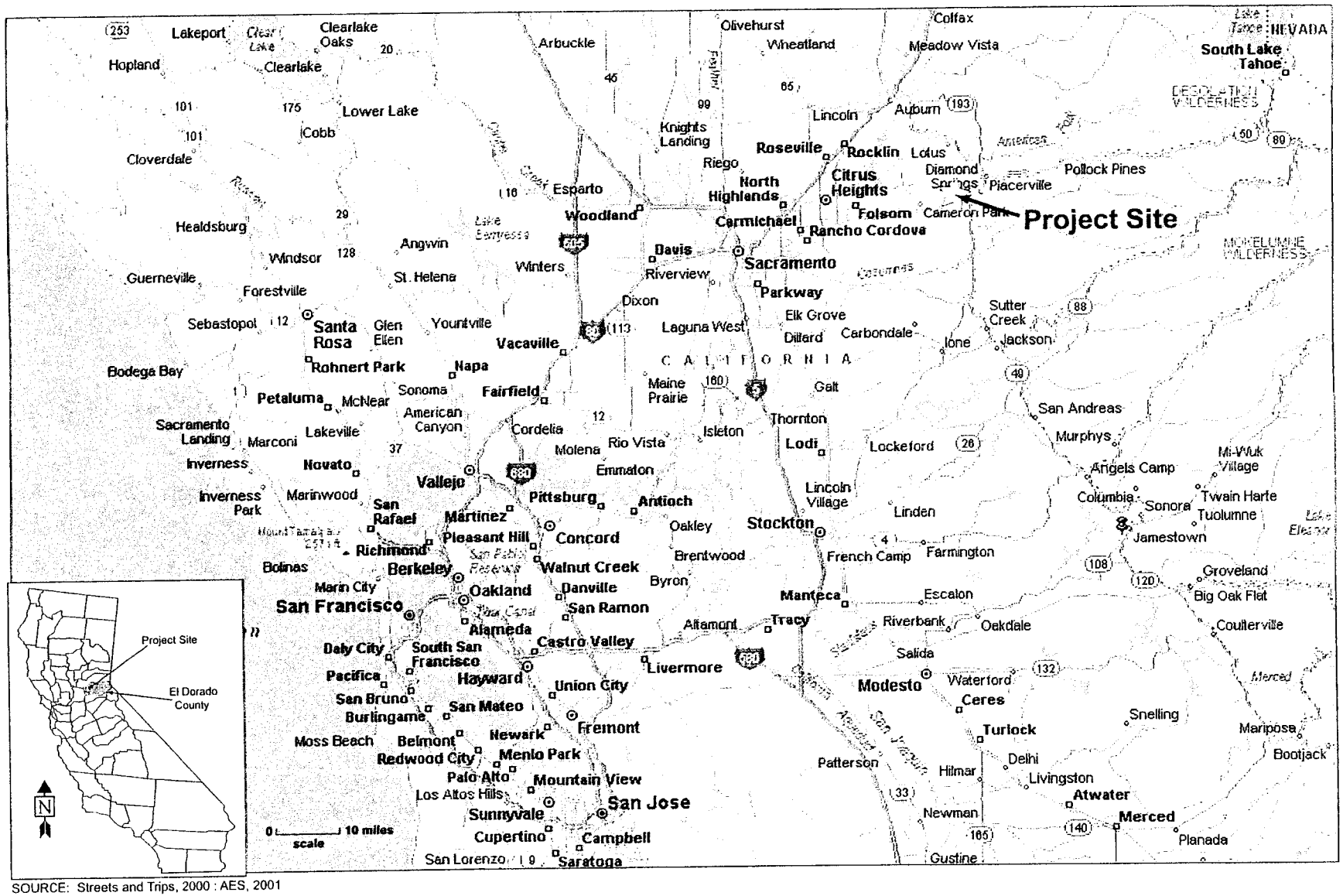
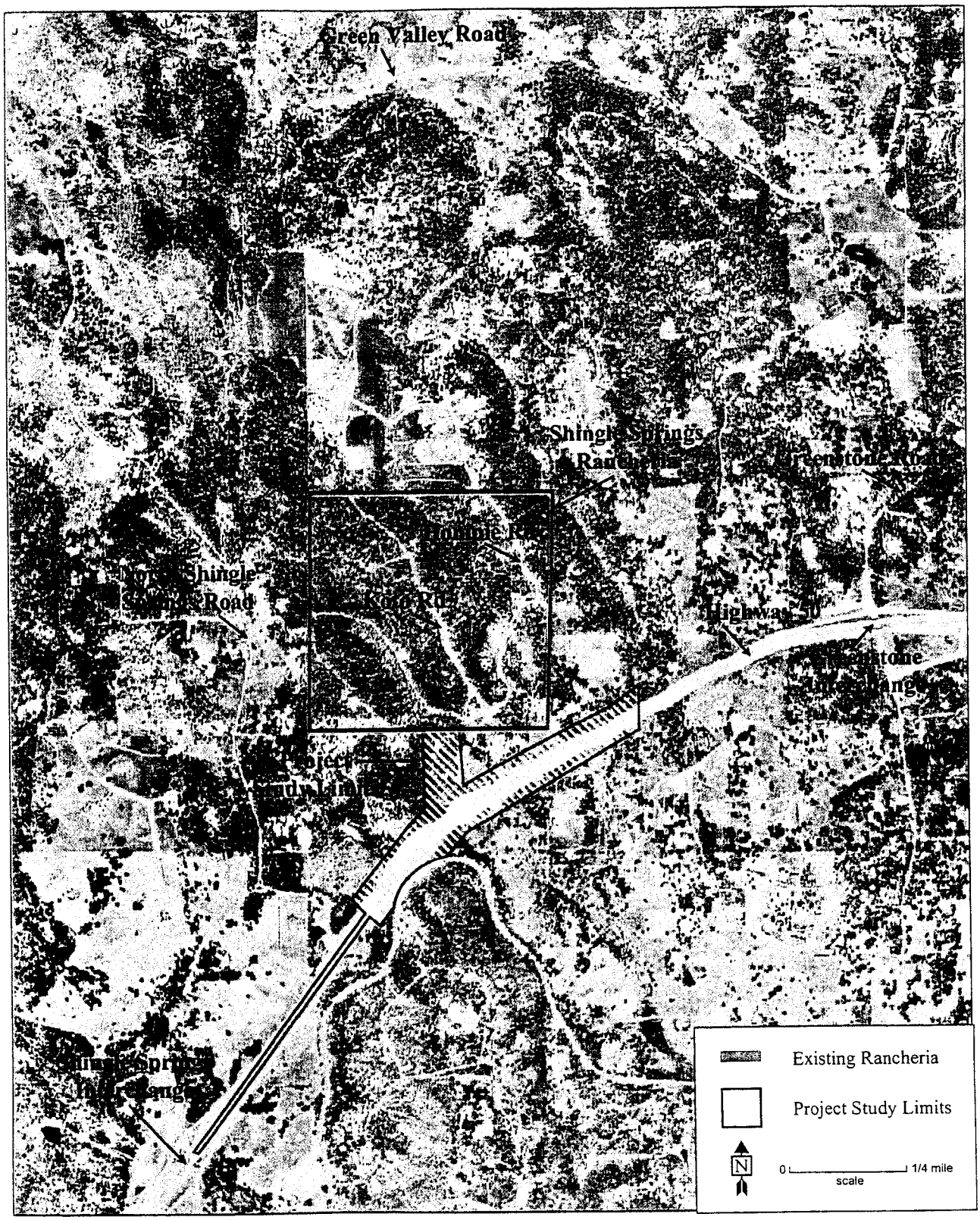


SOURCE: Streets and Trips, 2000 ; AES, 2001

Figure 1-1 Regional Location Map



SOURCE: Terraserver, 1993 : AES, 2001

Figure 1-2 Vicinity Map

Caltrans